

IN THE SPECIFICATION

Please amend the specification as follows:

Please delete paragraphs [0001]-[0002] and substitute therefor:

This application is a National Stage Application of and claims benefit under 35 U.S.C. § 365 to PCT application US03/32800, filed October 16, 2003, by Ernest C. Chen, entitled "MAXMIZING POWER AND SPECTRAL EFFICIENCIES FOR LAYERED AND CONVENTIONAL MODULATIONS," which claims priority to U.S. Application Serial No. 60/421,288, filed October 25, 2002, by Ernest C. Chen, entitled "MAXMIZING POWER AND SPECTRAL EFFICIENCIES FOR LAYERED AND CONVENTIONAL MODULATIONS," which applications are hereby incorporated by reference herein.

Please amend paragraph [0004] as follows:

[0004] U.S. Application Serial No. 09/844,401, filed April 27, 2001, ~~Publication No. US-2002-0181604-A1~~, by Ernest C. Chen, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," ~~attorneys' docket number PD-200181 (109-51-US-01)~~ now issued as U.S. Patent No. 7,209,524.

After paragraph [0004], please insert the following:

This application is also related to the following patent applications:

Application Serial No. 11/653,517, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on January 16, 2007, by Ernest C. Chen, which is a continuation of application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/165,710, entitled "SATELLITE TWTA ON-LINE NON-LINEARITY MEASUREMENT," filed on June 7, 2002, by Ernest C. Chen, which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/236,414, entitled "SIGNAL, INTERFERENCE AND NOISE POWER MEASUREMENT," filed on September 6, 2002, by Ernest C. Chen and Chinh Tran,

which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/693,135, entitled "LAYERED MODULATION FOR ATSC APPLICATIONS," filed on October 24, 2003, by Ernest C. Chen, which claims benefit to Provisional Patent Application 60/421,327, filed October 25, 2002 and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/913,927, entitled "CARRIER TO NOISE RATIO ESTIMATIONS FROM A RECEIVED SIGNAL," filed on August 5, 2004, by Ernest C. Chen, which is a continuation in part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial Number 11/619,173, entitled "PREPROCESSING SIGNAL LAYERS IN LAYERED MODULATION DIGITAL SIGNAL SYSTEM TO USE LEGACY RECEIVERS," filed January 2, 2007, which is a continuation of Application Serial No. 10/068,039, entitled "PREPROCESSING SIGNAL LAYERS IN LAYERED MODULATION DIGITAL SIGNAL SYSTEM TO USE LEGACY RECEIVERS," filed on February 5, 2002, by Ernest C. Chen, Tiffany S. Furuya, Philip R. Hilmes, and Joseph Santoru now issued as U.S. Patent No. 7,245,671, which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/693,421, entitled "FAST ACQUISITION OF TIMING AND CARRIER FREQUENCY FROM RECEIVED SIGNAL," filed on October 24, 2003, by Ernest C. Chen, now issued as U.S. Patent No. 7,151,807, which claims priority to Provisional Patent Application Serial No. 60/421,292, filed October 25, 2002, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 11/603,776, entitled "DUAL LAYER SIGNAL PROCESSING IN A LAYERED MODULATION DIGITAL SIGNAL SYSTEM," filed on November 22, 2006, by

Ernest C. Chen, Tiffany S. Furuya, Philip R. Hilmes, and Joseph Santoru, which is a continuation of Application Serial No. 10/068,047, entitled "DUAL LAYER SIGNAL PROCESSING IN A LAYERED MODULATION DIGITAL SIGNAL SYSTEM," filed on February 5, 2002, by Ernest C. Chen, Tiffany S. Furuya, Philip R. Hilmes, and Joseph Santoru, now issued as U.S. Patent No. 7,173,981, which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/691,032, entitled "UNBLIND EQUALIZER ARCHITECTURE FOR DIGITAL COMMUNICATION SYSTEMS," filed on October 22, 2003, by Weizheng W. Wang, Tung-Sheng Lin, Ernest C. Chen, and William C. Lindsey, which claims priority to Provisional Patent Application Serial No. 60/421,329, filed October 25, 2002, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/962,346, entitled "COHERENT AVERAGING FOR MEASURING TRAVELING WAVE TUBE AMPLIFIER NONLINEARITY," filed on October 8, 2004, by Ernest C. Chen, which claims priority to Provisional Patent Application Serial No. 60/510,368, filed October 10, 2003, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 11/655,001, entitled "AN OPTIMIZATION TECHNIQUE FOR LAYERED MODULATION," filed on January 18, 2007, by Weizheng W. Wang, Guancai Zhou, Tung-Sheng Lin, Ernest C. Chen, Joseph Santoru, and William Lindsey, attorney's docket number PD-202128A, which claims priority to Provisional Patent Application 60/421,293, filed October 25, 2002, and which is a continuation of Application Serial No. 10/693,140, entitled "OPTIMIZATION TECHNIQUE FOR LAYERED MODULATION," filed on October 24, 2003, by Weizheng W. Wang, Guancai Zhou, Tung-Sheng Lin, Ernest C. Chen, Joseph Santoru, and William Lindsey, now issued as U.S. Patent No. 7,184,489, which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 11/656,662, entitled "EQUALIZERS FOR LAYERED MODULATION AND OTHER SIGNALS," filed on January 22, 2007, by Ernest C. Chen, Tung-Sheng Lin, Weizheng W. Wang, and William C. Lindsey, which claims priority to Provisional Patent Application 60/421,241, filed October 25, 2002, and which is a continuation of Application Serial No. 10/691,133, entitled "EQUALIZERS FOR LAYERED MODULATED AND OTHER SIGNALS," filed on October 22, 2003, by Ernest C. Chen, Tung-Sheng Lin, Weizheng W. Wang, and William C. Lindsey, now issued as U.S. Patent No. 7,184,473, which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/961,579, entitled "EQUALIZATION FOR TWTA NONLINEARITY MEASUREMENT" filed on October 8, 2004, by Ernest C. Chen, which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/532,632, entitled "LOWER COMPLEXITY LAYERED MODULATION SIGNAL PROCESSOR," filed on April 25, 2005, by Ernest C. Chen, Weizheng W. Wang, Tung-Sheng Lin, Guangcai Zhou, and Joseph Santoru, which is a National Stage Application of PCT US03/32264, filed October 10, 2003, which claims priority to Provisional Patent Application 60/421,331, entitled "LOWER COMPLEXITY LAYERED MODULATION SIGNAL PROCESSOR," filed October 25, 2002, by Ernest C. Chen, Weizheng W. Wang, Tung-Sheng Lin, Guangcai Zhou, and Joseph Santoru, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/532,631, entitled "FEEDER LINK CONFIGURATIONS TO SUPPORT LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 25, 2005, by Paul R. Anderson, Joseph Santoru and Ernest C. Chen, which is a National Phase Application of PCT US03/33255, filed October 20, 2003, which claims priority to Provisional Patent Application 60/421,328, entitled "FEEDER LINK CONFIGURATIONS TO SUPPORT LAYERED MODULATION FOR DIGITAL SIGNALS," filed October 25, 2002, by Paul R. Anderson, Joseph Santoru and Ernest C. Chen, and which is a continuation-in-part of Application Serial No.

09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/532,524, entitled "AMPLITUDE AND PHASE MATCHING FOR LAYERED MODULATION RECEPTION," filed on April 25, 2005, by Ernest C. Chen, Jeng-Hong Chen, Kenneth Shum, and Joungheon Oh, which is a National Phase Application of PCT Application US03/31199, filed October 3, 2003, which claims priority to Provisional Patent Application 60/421,332, entitled "AMPLITUDE AND PHASE MATCHING FOR LAYERED MODULATION RECEPTION," filed October 25, 2002, by Ernest C. Chen, Jeng-Hong Chen, Kenneth Shum, and Joungheon Oh, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524, and also claims priority to ;

Application Serial No. 10/532,582, entitled "METHOD AND APPARATUS FOR TAILORING CARRIER POWER REQUIREMENTS ACCORDING TO AVAILABILITY IN LAYERED MODULATION SYSTEMS," filed on April 25, 2005, by Ernest C. Chen, Paul R. Anderson and Joseph Santoru, now issued as U.S. Patent No. 7,173,977, which is a National Stage Application of PCT Application US03/32751, filed October 15, 2003, which claims priority to Provisional Patent Application 60/421,333, entitled "METHOD AND APPARATUS FOR TAILORING CARRIER POWER REQUIREMENTS ACCORDING TO AVAILABILITY IN LAYERED MODULATION SYSTEMS," filed October 25, 2002, by Ernest C. Chen, Paul R. Anderson and Joseph Santoru, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/532,509, entitled "ESTIMATING THE OPERATING POINT ON A NONLINEAR TRAVELING WAVE TUBE AMPLIFIER," filed on April 25, 2005, by Ernest C. Chen and Shamik Maitra, now issued as U.S. Patent No. 7,230,480, which is a National Stage Application of PCT Application US03/33130 filed October 17, 2003, and which claims priority to Provisional Patent Application 60/421,289, entitled "ESTIMATING THE OPERATING POINT ON A NONLINEAR TRAVELING WAVE TUBE AMPLIFIER," filed October 25, 2002, by Ernest C. Chen and Shamik Maitra, and which is a continuation-in-part of

Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/519,322, entitled "IMPROVING HIERARCHICAL 8PSK PERFORMANCE," filed on December 23, 2004 by Ernest C. Chen and Joseph Santoru, which is a National Stage Application of PCT US03/020862 filed July 1, 2003, which claims priority to Provisional Patent Application 60/392,861, filed July 1, 2002 and Provisional Patent Application 60/392,860, filed July 1, 2002, and which is also related to Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/519,375, entitled "METHOD AND APPARATUS FOR LAYERED MODULATION," filed on July 3, 2003, by Ernest C. Chen and Joseph Santoru, which is a National Stage Application of PCT US03/20847, filed July 3, 2003, which claims priority to Provisional Patent Application 60/393,437 filed July 3, 2002, and which is related to Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524;

Application Serial No. 10/692,539, entitled "ON-LINE PHASE NOISE MEASUREMENT FOR LAYERED MODULATION", filed October 24, 2003, by Ernest C. Chen, which claims priority from Provisional Patent Application 60/421,291, filed October 25, 2002, entitled "ON-LINE PHASE NOISE MEASUREMENT FOR LAYERED MODULATION"; and

Application Serial No. 10/692,491, entitled "ONLINE OUTPUT MULTIPLEXER FILTER MEASUREMENT," filed on October 24, 2003, by Ernest C. Chen, which claims priority to Provisional Patent Application 60/421,290, filed October 25, 2002, and which is a continuation-in-part of Application Serial No. 09/844,401, entitled "LAYERED MODULATION FOR DIGITAL SIGNALS," filed on April 27, 2001, by Ernest C. Chen, now issued as U.S. Patent No. 7,209,524.

Please insert the following between paragraphs [0033] and [0034]:

FIG. 11B depicts the relative power level of an alternate embodiment;